

Water-Data Report 2008

03479000 WATAUGA RIVER NEAR SUGAR GROVE, NC

French Broad-Holston Basin
Watauga Subbasin

LOCATION.--Lat 36°14'21", long 81°49'20" referenced to North American Datum of 1983, Watauga County, NC, Hydrologic Unit 06010103, on right bank 250 ft upstream from bridge on Secondary Road 1121, 300 ft downstream of Cove Creek, 2.3 mi southwest of Sugar Grove, and at river mile 64.4.

DRAINAGE AREA.--92.1 mi².

SURFACE-WATER RECORDS

PERIOD OF RECORD.--October 1939 to current year. Monthly discharge only for some periods, published in WSP 1306.

REVISED RECORDS.--WDR NC-81-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 2,607.84 ft above NGVD of 1929. Satellite telemetry at station.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Maximum discharge for period of record from rating curve extended above 7,300 ft³/s on basis of slope-area measurement of peak flow, from profile based on floodmarks. Minimum discharge for period of record, result of freezeup. Minimum discharge for current water year also occurred August 25.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of July 1916 reached a stage of 22.1 ft, from floodmarks on barn 0.25 mi upstream from station, as witnessed by local resident; discharge, 28,000 ft³/s, from rating curve extended above 4,900 ft³/s, on basis of slope-area measurement.

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DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008
DAILY MEAN VALUES
[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	15	62	35	129	149	113	101	81	53	45	50	90
2	15	57	34	e113	158	111	98	77	50	38	40	77
3	17	53	44	e102	122	106	116	77	46	35	42	63
4	48	49	37	e95	146	2,180	118	76	45	34	31	54
5	109	46	36	e89	210	1,620	107	72	42	83	27	49
6	76	52	43	85	203	560	236	69	39	129	29	45
7	42	46	37	79	205	474	162	65	37	145	32	44
8	33	43	37	75	165	458	155	65	52	83	32	40
9	29	43	38	74	143	340	148	79	57	99	26	161
10	29	44	38	75	125	274	122	66	152	139	24	117
11	25	41	37	123	110	232	115	66	140	144	23	99
12	23	40	36	106	105	204	116	92	79	90	21	87
13	23	40	37	93	109	179	106	73	58	108	22	76
14	22	40	37	88	98	159	103	66	78	196	24	64
15	22	51	36	80	90	177	98	66	113	96	22	57
16	21	45	82	e75	86	216	91	75	70	75	20	59
17	21	40	65	83	88	173	87	68	57	65	19	58
18	21	38	e51	90	237	161	84	66	50	57	19	50
19	37	38	48	85	153	185	89	77	45	52	18	45
20	70	38	47	e81	131	266	130	66	42	47	17	43
21	36	38	61	e78	120	235	94	67	41	45	16	41
22	31	37	67	e76	114	190	89	57	69	43	16	39
23	70	36	210	74	109	171	85	54	89	48	15	36
24	258	34	166	69	101	156	83	56	55	44	15	36
25	400	34	112	e65	99	143	79	52	45	39	20	34
26	229	39	99	e62	111	134	78	49	42	38	72	53
27	147	48	92	60	120	127	78	49	62	38	952	169
28	106	41	101	58	105	121	114	60	46	36	283	110
29	87	37	165	59	101	121	101	72	55	48	159	74
30	75	36	145	69	---	112	86	55	60	36	106	60
31	68	---	158	62	---	104	---	63	---	42	86	---
Total	2,205	1,286	2,231	2,552	3,813	9,802	3,269	2,076	1,869	2,217	2,278	2,030
Mean	71.1	42.9	72.0	82.3	131	316	109	67.0	62.3	71.5	73.5	67.7
Max	400	62	210	129	237	2,180	236	92	152	196	952	169
Min	15	34	34	58	86	104	78	49	37	34	15	34
Cfs/m	0.77	0.47	0.78	0.89	1.43	3.43	1.18	0.73	0.68	0.78	0.80	0.73
In.	0.89	0.52	0.90	1.03	1.54	3.96	1.32	0.84	0.75	0.90	0.92	0.82

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 2008, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	109	155	172	210	257	299	254	175	144	111	116	119
Max	380	662	434	817	643	858	689	411	583	461	1,169	1,049
(WY)	(1965)	(1978)	(1951)	(1995)	(1998)	(1979)	(1987)	(1973)	(1992)	(1989)	(1940)	(2004)
Min	19.2	34.6	45.6	55.5	67.5	77.0	82.1	67.0	41.4	35.0	23.9	18.1
(WY)	(1955)	(1982)	(1964)	(1956)	(1941)	(1988)	(1986)	(2008)	(1988)	(1944)	(2002)	(1954)

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SUMMARY STATISTICS

	Calendar Year 2007		Water Year 2008		Water Years 1940 - 2008	
Annual total	34,630		35,628			
Annual mean	94.9		97.3		175	
Highest annual mean					297	1979
Lowest annual mean					84.7	1988
Highest daily mean	1,290	Jan 1	2,180	Mar 4	15,900	Aug 13, 1940
Lowest daily mean	15	Oct 1	15	Oct 1	8.1	Sep 13, 2002
Annual seven-day minimum	17	Sep 27	17	Aug 18	11	Sep 7, 2002
Maximum peak flow			7,950	Mar 4	^a 50,800	Aug 13, 1940
Maximum peak stage			12.84	Mar 4	29.60	Aug 13, 1940
Instantaneous low flow			^a 14	Aug 24	^a 6.5	Jan 1, 1954
Annual runoff (cfs)	1.03		1.06		1.90	
Annual runoff (inches)	13.99		14.39		25.80	
10 percent exceeds	168		161		319	
50 percent exceeds	68		69		115	
90 percent exceeds	26		33		39	

^aSee Remarks.